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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,101	11/14/2000	Stephen Carney	PD99-2484	8794

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EXAMINER	
NGUYEN, QUANG N	

ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 10/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/712,101	CARNEY, STEPHEN	
	Examiner	Art Unit	
	Quang N. Nguyen	2141	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 13 September 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ they raise the issue of new matter (see Note below);
   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____.
3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a)☐ affidavit, b)☐ exhibit, or c)☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: *None*.

   Claim(s) objected to: *None*.

   Claim(s) rejected: *2,4-12 and 21-33*.

   Claim(s) withdrawn from consideration: *1,3 and 13-20*.
8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Detail Action

1. This Office Action is in response to the Reply After Final filed on 09/13/2004. Claims 2, 4-12 and 21-33 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2, 4-12 and 21-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,412,004), herein after referred as Chen, in view of Guenthner et al. (US 6,360,262), herein after referred as Guenthner.

4. As to claim 4, Chen teaches a distributed streaming media server system, comprising:

a plurality of streaming media servers *(a plurality of multimedia servers 340 of Fig. 3)* that each store a selection of multimedia files (Chen, Fig. 3);

a master streaming media server *(a metaserver 350 of Fig. 3)* communicatively coupled to the plurality of streaming media servers *(communicating with plurality of*

multimedia servers 340 via a computer network 310 of Fig. 3) and that compiles mapping information regarding a location of each of the multimedia files that are stored on each of the plurality of streaming media servers *(the metaserver 350 comprises a metaserver database which includes information about the video data streams stored in each multimedia server as illustrated in Fig. 11)* (Chen, Figs. 3 and 11, C5: L46-54, C6: L6-10 and L31-48); and

at least one streaming media client that requests access to a multimedia file through the master streaming media server and receives setup information regarding the requested multimedia such that the at least one streaming media client may directly access the multimedia file from one of the plurality of streaming media servers *(at least one client computer 360 of Fig. 3 that requests access to a multimedia file through the metaserver 350 and receives the list of eligible servers that have the requested multimedia file such that the client computer 360 may directly access the multimedia file)* (Chen, C6: L41-48 and C10: L21-31).

However, Chen does not explicitly teach wherein the at least one streaming media client receives the setup information from one of the plurality of streaming media servers.

In the related art, Guenthner teaches a system and method of routing in a computer network having a pool of servers *(i.e., plurality of streaming media servers)*, operating in the "handoff" mode, capable of servicing requests for access to a set of server resource objects *(i.e., multimedia files)* as shown in Fig. 4B, wherein the Resource Router *(i.e., the master streaming media server)* receives the client initial

request (**step 1**), selects the most appropriate server *(i.e., server S1)* and forwards the request to the server S1 (**step 2**). The server S1 sends its response *(i.e., setup information)* directly to the client (**step 3**) and client dialogs with the server for subsequent access to the requested multimedia file (**step 4**) (Guenthner, Fig. 4B, C4: L64-67 and C5: L1-12).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Chen and Guenthner to have the at least one streaming media client receiving the setup information from one of the plurality of streaming media servers *(Guenthner, steps 3-4 of Fig. 4B)* since such methods were conventionally employed in the art to allow the system to select the "best provider" and redirect or forward the request to that server as **operating in "handoff" mode**, based on the object of the request, to provide enhanced availability, responsiveness and load balancing for client requests to object access across multiple servers (Guenthner, C4: L5-10 and C8: L20-25).

5. As to claim 2, Chen-Guenthner teaches the server system of claim 4, wherein the multimedia files comprise video files (Chen, Video content 1030 of Fig. 11).

6. As to claim 5, Chen-Guenthner teaches the server system of claim 4, wherein the request for access to the multimedia file by the at least one streaming media *(client computer 360)* is multiplexed *(through the network 310, i.e., the Internet)* (Chen, Fig. 3).

7. As to claims 6-8, Chen-Guenthner teaches the server system of claim 4, wherein the master streaming media server considers load balancing when determining which of the plurality of streaming media servers is selected for access by the at least one streaming media client *(the metaserver 350 selects the proper algorithm to balance the load such as by measuring how busy each multimedia server is and how close a particular client is to each multimedia server with the proper content, etc.)* using a load poll thread, a load average queue, and load average threads to determine the load balancing among a plurality of streaming media servers *(the metaserver periodically communicates with each multimedia server to receive its status information such as number of current connections and multimedia content)* (Chen, C7: L1-38).

7. As to claim 9, Chen-Guenthner teaches the server system of claim 4, wherein the master streaming media server *(the Resource Router)* selects one of the plurality of streaming media servers *(multimedia server S1)* different from the master streaming media server to access for the requested multimedia file and redirects the requesting client to exchange information directly with one of streaming media servers *(the Resource Router receives the client initial request (**step 1**), selects the most appropriate server S1 and forwards the request to the server S1 (**step 2**). The server S1 sends its response (i.e., setup information) directly to the client (**step 3**) and client dialogs with the server for subsequent access to the requested multimedia file (**step 4**))* (Guenthner, Fig. 4B, C4: L64-67 and C5: L1-12).

8. As to claim 10, Chen-Guenthner teaches the server system of claim 4, wherein the master streaming media server *(metaserver 350)* utilizes a logical content database *(metaserver database 940 which includes information about the video data streams stored in each multimedia server 340)* that is queried by the master streaming media server to identify which of the plurality of streaming media servers possesses a specific streaming media file that fulfills a request for the specific streaming media file originating from the at least one streaming media client (Chen, C6: L6-48).

9. As to claims 11-12, Chen-Guenthner teaches the server system of claim 4, wherein the at least one streaming media client, the master streaming media server, and one of the plurality of streaming media servers utilize a connectionless and stateless communications protocol *(i.e., TCP/IP)* (Chen, C3: L62-67 and C4: L1-15).

10. Claims 21-33 are corresponding method and system claims of method claims 2 and 4-12; therefore, they are rejected under the same rationale.

Response to Arguments

11. In the remarks, applicants argue in substance that

(**A**) Applicant submits that there is no motivation or suggestion to combine the teachings of Chen and Guenthner.

As to point (**A**), Examiner submits that **Chen** teaches a distributed streaming media server system, comprising:

a plurality of streaming media servers *(a plurality of multimedia servers 340 of Fig. 3)* that each store a selection of multimedia files (**Chen**, Fig. 3);

a master streaming media server *(a metaserver 350 of Fig. 3)* communicatively coupled to the plurality of streaming media servers *(communicating with the plurality of multimedia servers 340 via a computer network 310 of Fig. 3)* and that compiles mapping information regarding a location of each of the multimedia files that are stored on each of the plurality of streaming media servers *(wherein the metaserver 350 comprises a metaserver database which includes information about the video data streams stored in each multimedia server as illustrated in Fig. 11)* (**Chen**, Figs. 3 and 11, C5: L46-54, C6: L6-10 and L31-48); and

at least one streaming media client that requests access to a multimedia file through the master streaming media server and receives setup information regarding the requested multimedia such that the at least one streaming media client may directly access the multimedia file from one of the plurality of streaming media servers *(at least one client computer 360 of Fig. 3 that requests access to a multimedia file through the*

metaserver 350 and receives the list of eligible servers that have the requested multimedia file such that the client computer 360 may directly access the multimedia file) (**Chen**, C6: L41-48 and C10: L21-31).

However, **Chen** does not explicitly teach wherein the at least one streaming media client receives the setup information from one of the plurality of streaming media servers.

In a related art, **Guenthner** teaches a system and method of routing in a computer network having a pool of servers *(i.e., plurality of streaming media servers)*, operating in the "handoff" mode, capable of servicing requests for access to a set of server resource objects *(i.e., multimedia files)* as shown in Fig. 4B wherein the Resource Router *(i.e., the master streaming media server)* receives the client initial request (**step 1**), selects the most appropriate server *(i.e., server S1)* and forwards the request to the server S1 (**step 2**). The server S1 sends its response *(i.e., setup information)* directly to the client (**step 3**) and client dialogs with the server for subsequent access to the requested multimedia file (**step 4**) (**Guenthner**, Fig. 4B, C4: L64-67 and C5: L1-12).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of **Chen** and **Guenthner** to let the at least one streaming media client receives the setup information from one of the plurality of streaming media servers since such methods were conventionally employed in the art to allow the system to select the "best provider" and redirect or forward the request to that media server *(i.e., operating in "handoff" mode as*

illustrated in steps 3-4 of Fig. 4B) to server that client request in order to eliminate the bottleneck problem associated with the limited speed of a single multimedia server, reduce network congestion, increase the fault tolerance of the whole system and to provide enhanced availability, responsiveness and load balancing for client requests to object access across multiple servers (**Chen**, Abstract and **Guenthner**, C4: L5-10 and C8: L20-25).

Examiner believes that the motivation was given above to combine the teachings of Chen and Guenthner is sufficient.

In response to the applicant's argument that there is no motivation or suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Also, the examiner submits "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

(**B**) Prior Arts do not teach or suggest "contacting each of the streaming media servers to determine its operational status, wherein selecting one of the plurality of streaming media servers is further based on the determined operational status", as claimed in claim 24.

As to point (**B**), **Chen** teaches the selection of the proper algorithm allows the metaserver 350 to balance the load across all available multimedia servers by dynamically assigning clients to different multimedia servers each time a client requests a particular multimedia content. If some multimedia servers are busy *(i.e., determining its operational status),* then clients will be sent to a multimedia server that can service new clients *(i.e., selecting one of the plurality of streaming media servers based on the determined operational status)* (**Chen**, C7: L4-10). Also, to measure how busy a server is, the metaserver periodically communicates with each multimedia server to receive from each multimedia server its status information *(i.e., contacting each of the streaming media servers to determine its operational status)* such as: number of current connections and multimedia content (**Chen**, C7: L23-27).

Hence, Prior Arts do teach or suggest "contacting each of the streaming media servers to determine its operational status, wherein selecting one of the plurality of streaming media servers is further based on the determined operational status", as claimed in claim 24.

(**C**) The Office Action has failed to adequately explain how the references teach or suggest "examining bandwidth history of the plurality of streaming media servers, wherein selecting one of the plurality of streaming media servers is further based on the bandwidth history", as claimed in claim 25 and claim 32.

As to point (**C**), **Chen** teaches the metaserver should have a measure of how busy each multimedia server is by communicating with each multimedia server to receive its status information such as number of current connections and multimedia content. If some multimedia servers are busy *(i.e., could be given a reasonable interpretation in light of the specification as multimedia servers already fulfill its maximum number of connections or its maximum allowed bandwidth),* then the clients will be sent to a multimedia server that can service new clients *(i.e., wherein the multimedia server has not exceeded the max connections/bandwidth yet)* (Chen, C7: L4-10). Also, **Chen** does teach eventually, the metaserver will use more detailed network topology information *(as well-known in the art of load balancing such that bandwidth and/or bandwidth history are also one of the network topology information that could be used to select the appropriate/best server/provider to provide the services to the client requests)* such as whether the multimedia server is running and has not exceeded its maximum licensed connections, the load and/or the number of streams *(i.e., could be given a reasonable interpretation in light of the specification as the bandwidth)* per processor being currently served by the multimedia server, etc., in selecting the "best multimedia server" to serve the client requests (**Chen**, C7: L4-65).

Hence, by using *"more detailed network topology information"* in selecting the best multimedia server to serve the client requests in order to balance the load across all available multimedia servers, Prior Arts do teach or suggest "examining bandwidth history of the plurality of streaming media servers, wherein selecting one of the plurality of streaming media servers is further based on the bandwidth history", as claimed in claim 25 and claim 32.

12. Applicant's arguments as well as request for reconsideration filed on 09/13/2004 have been fully considered but they are not deemed to be persuasive.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (703) 305-8190.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Rupal Dharia, can be reached at (703) 305-4003. The fax phone number for the organization is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER